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VOL. XV

NOVEMBER, 1908

No. 2

The Agricultural Student



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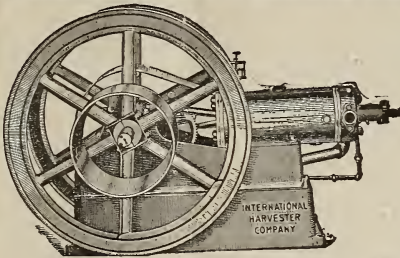
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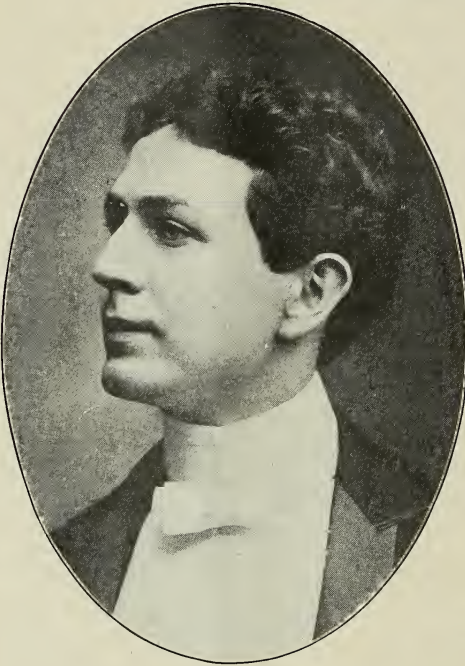
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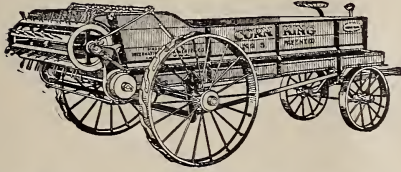
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Published Monthly by
THE AGRICULTURAL SOCIETY
of Ohio State University

Advertising Rates on Application. Address all Cor-
respondence to the Business Manager.

Terms of Subscription:

One Year.....	\$0 50
One-half Year.....	30
Single Copies.....	10

Entered at the Post-Office, Columbus, Ohio, as second-class matter

OLD GRAY OAK

A glorious tree is the old gray oak :
He has stood for a thousand years,
 Has stood and frown'd
 On the trees around,
Like a king among his peers ;
As round their king they stand, so now,
When the flowers their pale leaves fold,
The tall trees round him stand, array'd
 In their robes of purple and gold.

He has stood like a tower
Through sun and shower,
 And dared the winds to battle ;
He has heard the hail,
As from plates of mail,
 From his own limbs shaken, rattle ;
He has tossed them about, and shorn the tops
(When the storm had roused his might)
Of the forest trees, as a strong man doth
The heads of his foes in fight.

—*George Hill.*



Photo by C. S. Plumb

View at Longchamps

THE AGRICULTURAL STUDENT.

VOL. XV

OHIO STATE UNIVERSITY, COLUMBUS, NOVEMBER, 1908

No. 2

HORSE RACING IN FRANCE

Prof. C. S. Plumb

Horse racing has been a very popular sport in France for a long time. As far back as 1323 it is said that horse racing was conducted under Charles le Bel. As a real popular sport, however, it had little hold prior to the organization of the French Jockey Club in 1833. However, during the first empire, about 1806 to 1810, horse races were systematically conducted. Today the sport is very popular in France, and larger crowds attend the races than in any other country of the world.

The French race track is usually an oval of turf—a rich, green, short-clipped sod. Slat paling or some common form of fencing surrounds the track, and the field is not enclosed in the tight-board fashion. The courses seen by the writer are very attractive in this beautiful turf, comparable with the finest lawn. Two of the most noted race tracks in France are those at Longchamps and St. Cloud, both being in the suburbs of Paris. That at Longchamps was constructed in 1856-57. It is regarded as one of the most beautiful race grounds in Europe, and is considered very superior as a course on account of its ability to drain easily and smoothly from rain.

The most noted race in all Europe is known as the Grand Prix de Paris. It is held on Sunday at Longchamps and is famous over the world for three things: First, it has the greatest attendance of

spectators; second, the prize money is the largest offered in the world; third, the character of the competition is the very best.

The Grand Prix is held under the auspices of the French Jockey-Club. The distance of the course is 3000 metres or about a mile and a half. The French have their tracks arranged so that races of different lengths can be run. In an afternoon of racing, some events may be for 2500 metres and others for 3000. The Grand Prix is open to the world. As a result each year horses from different European countries and the United States compete. The British have won many times.

The Grand Prix stake is now 300,000 francs—about \$60,000. The city of Paris gives 250,000 francs and the five leading railroads entering Paris add 50,000 more. An entry fee of 1000 francs is charged, with certain cash forfeits, if one does not take part, according to date of withdrawal.

When the Grand Prix occurs the people of Paris turn out in great numbers. A beautiful, wide boulevard extends from the Arch of Triumph in the city, for a distance of three or four miles, through the Bois de Boulogne, to Longchamps, on one side of the bois or park. The crowd attending the race, toward noon of the day it occurs, moves in a great army down the boulevard to Long-

champs. This in itself is such an interesting sight that many thousand people sit in chairs along the curbs, watching the people pass by in carriages, automobiles and on foot.

Most of the racing in France is done under the saddle, both running and trotting. Some is done in harness and with sulky, but not commonly. The sulky does not seem as attractive on a grass course as on a nice smooth dirt track.

Longchamps is used for a variety of purposes besides racing. The annual army review of France takes place here, when 25,000 or more men pass in grand parade before the president and his cabinet. Consequently there are beautiful and commodious grand stands of steel, brick and stone, capable of accommodating many thousands. From the top of one of these stands I had opportunity to see the races to the very best advantage.

In the 1908 Grand Prix many horses were originally entered and eighteen participated. A double tape line was stretched across the track, and the horses were placed against this. As soon as all were ready and lined up the start was made. The horses were all under saddle. The race was a running one, and the jockeys were light little fellows that often rode almost on the withers and necks of their steeds. An immense throng crowded the stands, the sides of the track and the center of the course. The official report of attendance was 328,165 persons, but one-half a million must have seen the race, for an immense crowd viewed the show from outside the fence. During the race only suppressed excitement was to be seen. There was no cheering or yelling. A murmur could

be heard, occasionally some one would call out the name of a horse that he was interested in, thinking him in good place, but no enthusiasm such as Yankees are accustomed to see was visible. The jockeys sped their horses about the course, stringing along in the end, but with a close bunch in the lead. At the finish, Northeast, entered by W. K. Vanderbilt, of New York, led the race and also established the best record for twenty years, that of 3:14 2-5.

The results of the race were a disappointment to many. Northeast was not a favorite and few had thought of him as a winner. He was a comparatively unknown horse.

At the French races betting is universally engaged in under government supervision. Almost every one bets, including women. Betting booths are provided where the people purchase tickets on their favorites and enormous sums of money change hands. It is doubtful if races could be supported without the betting. The people over there believe in it, and so far as I am aware there is no discussion against it. But there are no wheels of fortune or anything of that sort, such as disgrace our American race tracks. It is plain, straight betting on the races, with no gambling otherwise.

The character of the grounds and the crowd are very interesting. Elaborate flower beds, much beautiful shrubbery and lovely drives are prominent at Longchamps. The people are well dressed, and rich and poor seem to enjoy the Grand Prix thoroughly. Many women are present, and elegant gowns, beautiful hats and much splendor of dress is a feature of this great race.

WHAT THE GOVERNMENT IS DOING FOR APICULTURE

Arthur H. McCray, '08

Perhaps some of the readers of THE STUDENT may know that the Department of Agriculture at Washington is engaged in the study of beekeeping, but along just what lines the work is being carried out and how it is being done a lesser number are no doubt familiar. And we think it may prove of sufficient general interest to give a brief account of what our government is attempting to do towards furthering the interests of those engaged in this new industry.

The honey bee has been known and cultivated almost ever since man himself has existed as a social being, but it is only within recent years that the industry has assumed any great proportions and be-

gun to be placed upon a scientific basis. Formerly in our own country the bees were kept in sections of hollow trees, known as "gums." It will be understood that these were simply a part of the tree forming the wild haunt of the bee, and when the tree was felled it was such a simple matter to cut out a section and carry away the bees' home, honey and wax. Later when a swarm issued it would be natural to hunt up a section of tree for the new swarm. From such crude methods of our forefathers with the consequent crude product of crushed bees, pieces of wax, dirt and wood from the "gum," together with enough honey in the mixture to give it the name of



View at Longchamps

Photo by C. S. Plumb

honey, we have progressed until the product is indeed a food fit for the gods. Honey appears today in our country in two main forms. Comb honey usually in little rectangular boxes of approximately a pound weight, known as section honey, and liquid honey, secured by shaving the thin capping from the surface and throwing the liquid honey out by centrifugal force. Such honey is known as extracted honey.

In the south the beekeepers put up their product in a somewhat different manner, calling it bulk comb. This consists in cutting honey from frames not "sections" and pouring over this comb extracted honey. The proportion being one-third of the comb and two-thirds of the extracted by weight.

A fourth form of marketing honey has recently made its appearance. This is known as brick or candied honey, and is simply secured by causing the extracted honey to granulate, and then cutting into cubes or whatever form desired. Such honey finds most ready sale in the cool season when it does not melt and become a menace to the tidy housekeeper.

Now a word in regard to the adulteration of honey. The comb honey cannot become in any way the object of greed on the part of the manufacturer. It is as easy to manufacture eggs which will hatch as it is to manufacture comb honey. The only way comb honey can be adulterated is by feeding some cheap substance matter to the bees, which they will store in the comb as honey. And in Germany recently the courts have handed down a decision stating that adulteration through the animal body is impossible and therefore anything stored by the bees is honey, which may be second-rate to be sure, but is honey nevertheless. Be that as it may, suffice it to say that in this country it has not been found profitable to attempt the production of honey

by feeding the bees any sugar, syrup or other sweet solution and one buying section honey may feel quite sure that it is "real honey." As to whether it is first class with the proper consistency, color, and that subtle property of the volatile oil which gives a delicate flavor is quite another thing. Extracted honey may be adulterated with sugar, syrup and various other undesirable substances, and their detection, as with adulteration of other food products, is a matter for the chemist.

Any one interested in this matter will find the bulletin entitled, "Chemical Analysis and Composition of American Honey," worth their attention. This is Bulletin No. 110, Bureau of Chemistry.

Besides honey another product of the honey bees deserves attention and it would seem from present indications, will receive more attention by beekeepers in the future, and that is beeswax. This is a secretion of the worker bees and to be able to produce one pound of wax it is estimated that fifteen to twenty pounds of honey must be consumed. From this it will be seen how much more economical the production of extracted honey, in which the combs after having the honey thrown out are returned again and again to be filled by the bees.

The Division of Apiculture at Washington has recently made a study of wax production in California and the Hawaiian Island, and it would seem that this phase of the industry may become very important. Beeswax has various uses in the arts.

A serious menace to beekeeping wherever bees are kept is a bacterial disease known as "foul brood." In reality there are several bacteria which may cause disease in bees and which are spoken of altogether as "foul brood." In this disease the larval stage of the bee becomes a rotten, decaying mass, and the

evil if not looked after may soon infest and destroy hundreds of hives. Technical Series No. 148, Bureau of Entomology, entitled the Bacteria of the Apiary, gives an excellent account of these diseases from the viewpoint of the bacteriologist. A more popular bulletin for the practical beekeeper is to be issued soon.

Another phase of the work which is just being taken up is the study of the development from the egg to the adult, or embryology, and Dr. James N. Nelson has just entered the Division of Apiculture to take up this work. Some of our "strictly practical" apiculturists may wonder in what manner this will increase the honey crop, just as the man with only dollars in view wants to know what good will come from sending the farm boy to the agricultural college to "learn farming'."

Other lines of work taken up by different men in the Division of Apiculture at present include a study of the internal and external anatomy, behavior, wax production and breeding of the bees.

At present the Division of Apiculture employs seven men and an apiculture clerk. The leading bee journals from all parts of the world reach the office, and the library, while not complete, is already quite worthy of mention and is growing by constant additions from the French, German and Italian language, in addition to the English publications. Of the bulletins issued by the Division a number are for free distribution to interested persons as with all other government publications, while likewise for others a nominal sum is charged.

SHEEP AND DOGS

R. M. Wilbur, '09

The problem of dealing successfully with the question of the sheep-killing dog is one which has not as yet been solved. To be sure dog laws have been passed which provide a tax on every dog and the money so collected is placed in the hands of the township trustees to pay for the losses of the farmer occasioned by the ravages of the supposed to be decent dogs, but the law is evaded in too many instances. Owners do not turn in their dog tax to the assessor and consequently we have numerous curs prowling about upon which no tax is paid and that very cur probably the property of a farmer who keeps a flock of sheep and who when any of his sheep are killed becomes angry at his neighbors for keeping a sheep-killing dog, when in reality he is doing the same thing as this neighbor. This failure to

turn in the fact that one is the owner of a dog or dogs results in a deficit in the hands of the township trustees and soon a lack of funds to meet the claims of farmers who have had sheep killed.

The losses occasioned by dogs each year is enormous, not alone from the fact that any certain number are killed, injured or pounded, but also the indirect loss of, we might say millions of dollars annually due to the fear of thousands of American farmers of embarking in the business because they know that sooner or later their flock will be ravaged and many killed and others injured. This fact alone has kept many men out of this business and especially is this true in Southwestern Ohio, where some years ago we had noted flocks of Merino sheep and large numbers of stock sheep running over the hills and now you will find

a relatively small per cent. of sheep in this district. And to what is it due—to the fact that the miners of that region each keep a hound which he does not feed but once a year and that just before a coon hunt and the hound is allowed to find food for himself and is forgotten when the assessor comes around. This is also true in Greene and Washington counties of Pennsylvania, and several parts of West Virginia. Only recently an article appeared in one of our leading agricultural papers, giving the number of sheep in a certain county of West Virginia as 173, while the number of dogs in the same county was over 1700. Another reason for the inability to enforce the law is the worthlessness of the miners and the inability to pay damages for sheep destroyed by his dog in case the ownership is proven and the dog identified.

But recently the agitation of a dog law and the relation of dogs to sheep raising was taken up in Kansas and the percentage of the sheep to number of dogs, in one instance, was 1300 per cent., in favor of the dogs. The attention of Hon. F. P. Coburn was brought to this significant fact, who stated that he realized the risk which the sheep man must run, and in commenting on dogs in general said:

"The average Kansas canine (your Bob and Tanny and my Tige and Togo always excepted, of course) is a worthless sycophantic, lawn-defiling, flea-breeding, fly-snapping, porch loafer by day, equaled by no other domestic animal in habits of unquestionable nastiness, and a sneaking, murtherous, cruel coward, prowling all the country side by night with a lust for mere wanton slaughter unknown to any wild beast harmonizes

with the harmless, beneficent sheep only after the sheep's flesh is inside his stomach, its wool in his teeth and his lips dripping with blood."

This is only too true in a great many cases, but how are we to remedy it. To be sure, in this state, the law holds the owner of the dog liable for any damage done and also allows the dog to be killed if caught in the act or identified, but that has not been altogether satisfactory. It usually results in a neighborhood quarrel and much bad feeling.

Means of protecting the flocks from these prowlers are not abundant. For the man with a relatively small number of sheep, twenty-five to two hundred, it is often possible to fence against dogs. Almost all of our standard woven fences may be taken as being dog proof if a barb wire is placed on top and if attention is given to gates and the holes under the fence, dogs may be kept out and there will be no injury to the flock. A few years ago it was stated in many of the leading papers that Angora goats would fight dogs and that if three or four were allowed to run with the flock the dogs would be fought off by the goats. I think this has been proven to be almost entirely false, for although the goats may show some signs of fight he usually ends up by being as badly scared and running as hard as any of the sheep.

The fact that many well meaning sheep men have been forced to quit the business is a sure indication of impossibility of making the business a success in a community where dogs are allowed to be considered more of a necessity than sheep and we hope soon to see a more stringent law and more rigid enforcement.



BOBOLINK

From drawing by R. J. Sim

“What! would you rather see the incessant stir
Of insects in the windrows of the hay,
And hear the locust and the grasshopper
Their melancholy hurdy-gurdies play?
Is this more pleasant to you than the whirl
Of meadow-lark, and her sweet roundelay,
Or twitter of little field-fares, as you take
Your nooning in the shade of bush and brake?

—Longfellow.

POSSIBILITIES OF A FARM GARDEN

George W Hood, '09

Few farmers realize the importance of a farm garden, in connection with their more important field crops, toward which most of their energy is directed. Many people think that the garden does not pay in the sense of deriving direct money value, but it does pay a greater per cent. than the field crops for the enjoyment and the satisfaction derived from having a fine spot where the housewife can go at any time during the season and get a supply of fresh vegetables or a fine dish of fruit.

Every farmer will say that he has a garden, but what kind of a garden is it? As a rule one is safe in saying that out of one hundred farms you will find that on ninety-five per cent. of them it is the poorest kept piece of ground on the whole place. And why should such facts be true? Is it because the garden does not give a direct return of money or something that can be turned into money, as the staple farm crops do? The products of the garden are all consumed by the family, except in a few cases where some farmers bring a few tomatoes or potatoes to market and dispose of them, but this is rare in proportion to the number that consume what they raise. Of course, there is a certain value connected with every garden found in the country, but the present efficiency of the garden as it is usually found in comparison with what it ought to be, is very low. Most of the work, with the probable exception of the first plowing, is done chiefly by the women folks and the men pay very little attention to what is planted or how things are raised and only think of it when some vegetable is brought on the table for a meal.

The gardens usually occupy a larger space than is necessary, if managed

rightly and with some care on the part of the farmer to get as much as possible out of a given area or in other words, divert his mind from the extensive plan of farming as is usually found in the general field crops to the intensive mode of farming or gardening as you please. By intensive farming is meant the most that can possibly be gotten out of a piece of ground by having all the soil occupied all the time and not having any vacant places which will give room for weeds to come up. Nature itself will keep the ground occupied if the farmer does not and you cannot sight an example where a piece of ground will be idle if left alone, because invariably weeds will spring up and in a short time completely cover the ground. So it behooves every man to keep his ground filled with something that he can derive some benefit from and leave plants that use up the fertility of the soil be of some benefit instead of an injury.

In order to have a fine, first class garden some work is needed, but not so much as might be expected. Of course, you cannot plow the ground and plant the seeds and expect a garden of any consequence, but with a little care every day one will be surprised with the returns.

A garden sight should be as close to the house as is convenient, provided it is a little high and well drained by all means. If the soil is a little poor, but having good drainage and being convenient, there is no necessity of abandoning the sight because the soil is poor as in almost every case by the proper treatment the soil can be made very fertile and mellow and raise good vegetables. It is almost impossible to get too much manure on the garden and twenty or thirty

tons an acre is not too much. This should be spread over the ground evenly and never placed in piles and left for any time as the rains leach out the elements of plant food, especially the nitrogenous material and you have rank growth of the plants over the place where the pile stood and smaller growth around it. I said it was almost impossible to get too much manure on the garden and to my knowledge it is true, for all vegetables except potatoes and in this case it is not wise to plant Irish potatoes on ground that has been heavily manured the previous season, as in almost every case the scab will be more abundant due to too much decaying organic matter. The manure should be spread out evenly in the fall and allowed to lay all winter and as early in spring as possible should be plowed under, where it will decay. The earlier the plowing the better as it conserves moisture and makes the soil finer.

A garden should be arranged in a systematic way, laying out each space

and planting in proportion to the size of the family. In every garden you should find a short row of currants and goosberries; a row or two or both blackberries and raspberries, together with a small patch of strawberries. With this list of small fruits you will have a continuous supply through the entire season, beginning with strawberries and ending with blackberries. One can hardly realize the enjoyment of being able to go to your garden and pick fresh from the vines or bushes, nice fruit. This joy might be anticipated by many but realized by few. Besides the small fruits which are more or less permanent for a short time you should have a row of rhubarb, from which pies, wine and various other things can be made, and along with this might be added some asparagus.

Passing now from the small fruits you next take up the vegetables proper. The first thing of importance here is a small hotbed, built facing to the south, in which you can raise your early plants,



All alone with nature

such as cabbage and tomatoes and at the same time a small space devoted to some early lettuce or radishes. A hotbed is very easily constructed and is usually made by digging out a pit about two and one-half feet deep, which is usually lined with boards and filled up with fresh horse manure that has been allowed to ferment partly and then tramped down well. The boards in the pit should extend above the ground one foot or eighteen and should be at least six inches higher on the north side than on the south. This is then covered with sashes filled with glass. About six inches of good garden loam should be placed over the manure and the seeds planted. Very few people recognize the convenience of a hotbed until they have actually had one.

Now we will turn from the plants grown under glass to the garden proper.

It is needless to say that the most important thing is the early plowing of the ground and the subsequent cultivations that follow. Without cultivation one might as well not try to have a garden, because it will be almost a complete failure.

Every farmer is familiar with the vegetables grown in the garden and I will mention only a few of them. It is always well to plant onions in the fall thus giving a very early crop for the following spring. Tomatoes should be staked up and pruned at least three times during the season for the best results. It is always advisable to put a little nitrate of soda around each early cabbage plant as it starts it to growing quickly and produces earlier cabbage. Frequent cultivation is the success to all good gardening.

AGRICULTURE IN THE RURAL SCHOOL

Nellie N. Williams, of the Bath Township (Green County) High School

The proposition to teach agriculture in the rural schools is comparatively a new one as far as an immediate intent is concerned. I shall first call to your notice the action of the Ohio State Grange at its Warren session in December, 1906. The report to that body by the committee of education was prepared by men and women of liberal culture and one feature of the report was as follows:

"The country school is the farmer's school and we earnestly recommend that in it the country boy be taught some of the fundamental principles underlying the farmer's vocation."

This is not all of their report on that subject but in the very first sentence they have made a mistake when the farmer's boy alone is mentioned. In the actual teaching you will find the girls as much

interested and enjoying the study as much as the boys.

Those advocating that the elements of agriculture be taught in the rural schools hope for many advantages and expect many hinderances and objections. The limits of this paper will not permit a detailed estimate of the value of even a slight increase in farm products of Ohio, much less in the United States. A single illustration may be given: Wheat is growing at this hour on three million acres of Ohio's domain. If by more intelligence and better methods an increase of but three bushels per acre resulted, the nine million of bushels added would pay a very large per cent. of the entire cost of the rural schools of Ohio. The farmer knows that investment and labor in agriculture does not yield such returns

as he sees in other lines of business. This contrast has become so marked as to cause young men and women to desert the farm for the city. It is not expected or desired that all bright boys and girls remain on the farm, but we need some of them, and if the present stampede from the farm is to be checked better returns for labor must be realized, condition of farm life made more attractive and the coloring of the farm house less sombre.

No one will suggest that this change can be brought about by increased hours of labor. Farmers work hard enough at present. The increased returns must be by increased intelligence in conducting farm operations and by recognizing the fact that agriculture is a science as well as a teachable subject in our common schools. The beginning should be modest and conservative; initial large attempts will result in failure.

Much is being done in many places to transform the rural school grounds from a desert place over-run with weeds and given over to the keeping of the pigs and cattle of the neighborhood, into a rural park well planted with beautiful trees, shrubbery and flowers. Improvement committees could be appointed on school room and yard decoration; in short, every school site should be converted by the pupils into a miniature model park and playground—trees, lawns, walks and flowers outside; books, pictures, decorations and music inside. To the boy or girl coming from a home with similar environments the aesthetic side would be satisfied and stimulated, while it would be a dream of Arcadia to the child from the home where the yard is the battle ground for the ducks and pigs, cattle and weeds, where no tree casts a shadow, a dwelling bare of books, pictures, decorations and music, and lacking a refinement

also. In the heart of such a one would be born higher ideals of a home, ambitions that would give the parents no rest until something was done to improve the environment of his home. Who can sum the possibilities of such influences? Like the pebble thrown into the sea, the waves go out and out until they reach the farther shore. I imagine some farmers will say, "Well, my father farmed good enough for me; I can teach my boy how to farm without this nonsense; all he needs when he goes to school four months out of eight or nine is reading, writing and arithmetic." That is where a very serious mistake is made. If people would let their children know more than children living fifty or a hundred years ago, there would be less dissatisfaction among young people on the farm. Tell the boy, show him, and lead him to observe a thousand and one things of interest and if he is worth keeping in the country he will never again think of his father's farm being a dead and lonely place to stay. The question of cost should not be too seriously considered when dealing with the farmer's choicest product—his own child.

The rural schools of Ohio have done a great work, but the new needs of the farmer demands more preparation than they now afford. Any other business is conducted by men and women of trained minds and special preparation for their life work. The day when physical strength is the winning factor is past, even on the field of battle. The morning of the day of mental power has dawned and the rays of its sun must fall brightly upon the farmer and the farm house must be made a more beautiful and attractive place to be. Farm life must be made a larger, fuller life, then it will be the happiest because it is free.

BREEDING EXPRESS HORSES

L. M. Oyster, '10

The express horse is more of an accident than a type, or a variation from some other type, for which the horseman breeds. Expressers may be described as over-grown, low quality coachers. They must have a bit of draft blood to give them size. They must be able to get out and trot briskly with a good load. The qualities desired in an express horse are size, style, action and endurance.

Every breeder of any prominence in the breeding of express horses seems to have a different cross in mind from any other breeder. Theoretically, very satisfactory express horses could be produced by crossing heavy draft mares with coach stallions of plenty of finish and freedom of movement. This should give size and action combined. However, in cross-breeding all theoretical cases do not work out as they should, because of variation, and the results are frequently disappointing.

Mr. Richards, of Illinois, a prominent breeder, says: "I have always believed and still believe the horse weighing 1200 to 1500 pounds, clean limbed, with plenty of action, is the ideal horse for general use, and I believe just such horses can be produced by crossing any of the larger breeds, preferably the Percheron mare, with the standard bred horse. The mare should not be too leggy. I at present own a standard bred horse and have mated him to Percheron mares and others of the larger breeds and the get has invariably been a foal that has developed into a horse sixteen hands high, weighing from 1400 to 1500 pounds, with plenty of style and action, that can break away and show considerable speed at the trot. The get of the Hackney in this kind of a cross are too small, and a

cross of the coacher is too beefy in the hock and void of style and action—very desirable points in any horse."

Larson, another prominent breeder, says: "I owned a large bay standard bred horse four seasons, and had all kinds of mares to him except standard bred mares, and I noted carefully the result. Mares with Clydesdale breeding would produce the expresser type nearly always; Shire mares frequently, and French mares hardly ever, as the colts would have too broad and short rumps. I would get mares one-half to three-fourths Clydesdale, with not too coarse or too much feather on legs, nor too wide nor steep or short rump and get a large, standard bred stallion, one descended from a large family and not largely accident. There are exceptions, of course, but the reason I prefer the standard bred stallion is that in my experience the colts from the standard bred were more level headed and easier broken and mannered than the colts from the coach horse."

Mr. J. I. Teasdale, a prominent western breeder, says: "I would use thoroughbred stallions sixteen to sixteen and one-half hands, weighing 1200 pounds. Such stallions as these I would breed to big-boned, deep-bodied grade draft mares, weighing from 1500 to 1650 pounds and standing from sixteen to sixteen and one-half hands. The difference in weight between stallion and mare not being more than 400 pounds, the offspring would not be badly balanced on account of violent outcross. The produce from such a cross as this would, I believe, be clean legged, standing sixteen hands or a little over, and would weigh from 1400 to 1550 pounds; would show quite a lot of quality and very little

drafty appearance—would, in fact, come up in every respect to the definition of an expresser. He would certainly be able to trot ably and smartly with a load behind him, and the amount of thoroughbred blood in him would prevent him from ever quitting. I am quite satisfied that horses of this description bred this way, could be bred with regularity and success. There is no such thing as chance where nature is concerned, especially in breeding. There is always some natural cause even for every freak or sport that is born. Breeding mares of the kind described to any of the breeds of coachers would not do. The weight, substance and purely cold blood of the stallion, mingled with the same qualities of the mare, would cause the produce to be too heavy, coarse and drafty; would bring too much hair on the fetlocks; would cause lack of quality and style, and lack of ability to trot off ably and smartly. A trotting bred stallion would be better, of course, than any

of the coach breeds, but still the produce from a trotting bred stallion and the mare described would be inferior in all the qualifications you require to the produce from a thoroughbred stallion and the mare mentioned before. The amount of cold blood there is in a trotting stallion when mingled with the purely cold and sluggish blood of a grade draft mare would tell more seriously on the offspring and give it a coarser appearance and a greater likelihood to lack quality, style and stamina than would the clean hot blood of the thoroughbred stallion.

A horse to be of the express type should be clean legged, standing at least sixteen hands and should weigh from 1400 to 1550 pounds. He should also show a lot of quality, snap and a fair speed when pulling a load. The best way to produce this kind of a horse, I think, is to cross the thoroughbred stallion on big draft mares of from 1500 to 1600 pounds.



A Row of Valuable Catalpas

COMMERCIAL PEACH GROWING IN OHIO

Emmett J. Hoddy, '09

The beginning of peach growing in Ohio dates back to the early settlement by the whites. The seeds first planted were brought from the east by friends of the westerners or by the latter themselves.

Thus it was that seedlings were planted in fence rows or sprang up unhindered from castaway pits. Early orcharding was of this kind. The trees were grown almost entirely in out-of-the-way places; and of all these corners no others were so generally used as the angles of the Virginia rail fence. The care and attention devoted to early orchards are indicated by the places given the trees. The fruit crop was an incident of farming. The trees were usually left unpruned, except by occasional overloading and the product was looked upon as nature's care, not man's. Under these conditions of new land, forest protection and propagation from seed, it must be admitted that the results were often good. That they were better than now obtained by the same treatment may also be true. Conditions have changed in many ways.

We have no early statistics of peach crops in Ohio. The earliest is that gathered in 1868. The yield of peaches for the state in 1868 was 599,500 bushels; for 1869, 1,426,200 bushels. The total production reached its lowest point in 1875, with 36,360 bushels, and in 1884 with 24,490 bushels. The largest yields were in 1874, 2,235,574 bushels; in 1878, 1,476,160 bushels; in 1888, 1,594,890 bushels, and in 1896, the banner yield of recent years, 1,935,514 bushels.

The average annual yield for the state for 1890-1894 was 538,097 bushels; for the decade from 1880-1889 it was 696,516 bushels, and for the ten years, 1870-1879, 609,452 bushels.

For the period of 1890-1894 the largest

production of peaches in one year in one county was in Ottawa county for 1894, and amounted to 306,858 bushels. The largest yield from any county for any year was from Ottawa in 1895, when that county produced 488,844 bushels out of a total of 642,295 bushels for the entire state.

The most striking fact in later Ohio production is its greater concentration, and making it the subject of greater care and study where pursued. The favorable situation of the "Peninsula" and "Island" district north of Sandusky Bay has gradually been recognized, while the same may be said of certain elevated lands of the hill regions. Especially has the superiority of the clay soils in the hilly counties been but recently realized.

In general, the attitude of the grower toward the peach crop also has changed. The fence corner no longer yields profitable investments in peach growing; borers, leaf curl, yellows, and other troubles make the trees short-lived or the fruit inferior. The poorest land, irrespective of situation, offers the same disadvantages. Only fair land, of fair quality, with care and labor in pruning, training and cultivation, may yield an adequate return to the orchardist.

Although peach growing on a commercial scale is confined to the southeastern portion of the state and a small district in the north, bordering the lake, there are several localities of minor importance in the state where peaches are grown for profit. On the somewhat rolling land south of Columbus, Ohio, where the present Hartman Stock Farm is located, was but a few years ago one of the best peach orchards in Central Ohio. It was known as the Spangler Peach Orchard, and covered one of the largest hills in that community.

OHIO CORN SHOW

T. H. Parks, '09

The coming corn show to be held at Townshend Hall, O. S. U., Columbus, Ohio, November 23, 24 and 25, is the first show of its kind for Ohio.

The annual meeting of the Ohio Corn Improvement Association will be held at the same time, and promises to be a well attended and interesting meeting. The first session will be held Monday evening, November 23, and will continue during the forenoons and evenings until November 25. The afternoons will be left open for the examination of exhibits and to allow visitors to attend the weeks' corn judging course which will be offered by the University. Some of the best agricultural experts from the Department of Agriculture and from neighboring states have agreed to appear on the program, and there will be reports of committees and discussions dealing with Ohio conditions in particular. The premium list for the show has just come from the press and is good enough to insure the success of the show. The total aggregate value of the premiums is \$1200, including \$450 in cash prizes and five beautiful gold and silver trophies.

A large part of the premiums are placed on the ten-ear exhibits, but there are also plenty of valuable premiums in the individual ear and in the thirty and seventy-ear classes. The feature which appeals most strongly to the writer is the large number of prizes in the several classes. For instance, in Class A, ten best ears yellow corn, there are thirty prizes offered and in several of the other classes the number of premiums range from fifteen to twenty, so that everybody has a fair opportunity of winning a prize.

Entries close on Wednesday, November 18, and exhibits will be received up to noon, November 21. There is no movement which will do more to increase the yield of Ohio's greatest crop than the study and discussion of our conditions at the state corn show, and every corn grower is urged to give it his earnest support and make it the success it should be.

For premium list or further information write V. M. Shoesmith, Chairman of Committee on Corn Institutes and Expositions, Ohio State University, Columbus, Ohio.

GRAIN DEALERS' DAY

Among the special days arranged at the National Corn Exposition, is "Grain Dealers' Day," and the date selected is Tuesday, December 15, the sixth day of the exposition.

"A boost for better oats" is the slogan adopted. Prof. M. L. Bowman, of the farm crops department of the Iowa State College of Agriculture, will deliver an illustrated lecture on "The Improvement of the Oat Crop," while J. C. Murray, of the grain department of the Quaker Oats Company, Chicago, will give an address on "The Relative Value of Good and Poor Oats to the Cereal Miller."

The program and discussion in the big audience room will be conducted under the auspices of the following associations:

Western Grain Dealers' Association, assisted by the Illinois Grain Dealers' Association, Indiana Grain Dealers' Association, Kansas Grain Dealers' Association, Ohio Grain Dealers' Association, Oklahoma Grain Dealers' Association, Tri-State Grain Dealers' Association, Texas Grain Dealers' Association, Farmers' Co-Operative Association of Nebraska.

THE AGRICULTURAL STUDENT

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W. L. Elser, '09	Herbert Watts, '10
Heber McClelland, '10	D. C. Mote, '10

NOVEMBER

EDITORIALS

At the mass meeting of Agricultural students held at 4 o'clock Friday evening, October 30, 1908, W. L. Elser '09, presided and short talks were made by Dean Price, Prof. Plumb and by the editor of the AGRICULTURAL STUDENT. A large number of Freshmen were present and considerable enthusiasm was aroused for the STUDENT. When the professors of the college evince some active interest in the paper the students begin to wake up and the result is already showing itself in subscriptions and in inquiries about the paper. If this interest is kept up Ohio's Agricultural College paper is going to take some big strides in the next few years and will make a deeper impression in the agricultural world.

A great amount of interest has been worked up in the State Corn Show to be held at the Ohio State University, November 23, 24 and 25, 1908, and also in the National Show to be held at Omaha.

The local shows throughout the country are beginning to be held and much interest is being taken in them by the farmers.

This first annual show in Ohio promises to be an affair of which Ohio corn growers will be proud. The list of prizes is one that would do credit to a show long established in any of the corn states. There are fourteen classes and the num-

ber of prizes is as high as thirty in some cases and the first prizes vary in value from \$75 down to \$10, besides three beautiful cups—one the National Stockman and Farmer's trophy for the annual sweepstakes prize for the best ten-ear exhibit in the show, one the Ohio Farmer's trophy to be awarded annually for the best county exhibit, and the Farm Management trophy to be given for the best record of field corn. The entire premium list can be procured from Professor V. M. Shoesmith, at the University.

Such an interest in the corn crop of the state cannot but result in a large profit for the grower in future years. For instance in Iowa, Representative Henry Brands, of Pottawattamie county, in a recent speech at the county experiment station, stated that the ten-ear sample of corn which he paid \$15.00 for at the auction at the close of their Short Course Contest at Avoca last January, gave a yield amounting to an increase of ten bushels per acre from the crop that was grown on similar soil where they used common seed. From the one acre that was planted with the choice ten-ear sample, Mr. Brandes and his son have already gathered eight bushels of very choice seed for next spring's planting which will plant about sixty acres.

Mr. Brandes grew 108 acres of corn this year and he estimates that he would harvest 1080 bushels of corn more this fall, had he planted his entire crop to prize-winning corn.

There are approximately 140,000 acres of corn grown in Pottawattamie county. A ten-bushel per acre increase would mean 1,400,000 bushels, worth about three-quarters of a million dollars.

In Ohio the success of the show will be due very largely to the efforts of Prof. Shoesmith, who is working very hard in order that Ohio may have a good show and make a strong impression at Omaha.

NEWS NOTES

R. N. Harned, '06, has been unanimously elected as entomologist of the Mississippi Experiment Station. He is also assistant professor of zoology at the Mississippi Agricultural College. Considering the importance of the entomological work in Mississippi, Mr. Harned is to be congratulated for the honor conferred upon him.

Kansas took first place in the live stock judging contest held at the American Royal, at Kansas City. Iowa took second place and Missouri third. Prof. W. L. Carlisle was the superintendent in charge of the contest.

A live stock judging contest was held recently in Massachusetts, under the auspices of the Federation of Agricultural Students. Three men composed a team and the animals judged were dairy cattle.

There has been a large demand for the October Extension Bulletin, "What Trees Do," by Professor Lazenby, and some extra copies have been printed to meet the call. This shows that the schools of the state are awakening to the importance of trees.

S. H. Shawhan, '07, now in the employ of the United States Department of Agriculture at Washington, spent a few days at the University last week. He is connected with the Bureau of Animal Industry and finds life in Washington equally pleasant and profitable.

On Friday the 23d of October, Professor Shoesmith and "Jack" Livingston

judged corn at the Mt. Vernon corn show. "Jack" returned on Saturday to assist at the show.

Professor Erf was judging dairy cattle at the Great Western Exposition, Salt Lake City, the second week in October, and was at Pittsburg on the 22d of October to give an address at the Pennsylvania Milkmen's meeting.

The Domestic Science Department is preparing the menu for the corn dinner to be held Thanksgiving evening in connection with the corn show. This insures a bountiful and delicious dinner.

O. J. B. Smith, '07, of the Department of Horticulture, is now instructor of horticulture in the Iowa State College. He expects to take his master's degree this year and will probably return to Ohio to engage in fruit culture.

Professor H. P. Baker, of Pennsylvania State College, was a recent visitor to the University. He is a college classmate of Professor Shoesmith and was entertained by him while here. Professor Baker reports a large increase in the number of agricultural students at Pennsylvania State.

The class in forestry improved the golden days of October by "getting acquainted with the trees." The campus and grounds of the University, the parks of the city and woods of the vicinity afforded material for this work.

The work in the ten weeks dairy course has been changed somewhat in order that those so desiring can come for two weeks and get special work in any department in which they may be especially interested or they can come for the entire ten weeks and get a certificate. The work has been so arranged that the students can come and take only the work in which he is interested. The five courses offered are as follows:

The testing of Milk and Dairy Products and Dairy Mechanics, January 11-22.

Farm, Dairy and City Milk Supply, January 25-February 5.

Butter Making, February 8-19.

Cheese Making, February 23-March 5.

Ice Cream Making, March 8-19.

Persons interested in the work should apply to Professor Oscar Erf, of the Ohio State University, for further information.

The large chemical laboratory in the north end of Townshend Hall has been remodeled somewhat by the Chemistry Department. The north end has been reserved for advanced students by running a strong woven wire partition through. By this means the advanced students can leave complicated apparatus out over night without fear of its being tampered with. The desks and floors of the entire laboratory have been refinished. The assistant's laboratory has been equipped with tables and apparatus and the vacant room in the south end of the second floor has been fitted up for the use of graduate students. The department has purchased a bomb calorimeter, lantern, more modern apparatus for soil analysis and smaller apparatus amounting to about \$2000.

The class in pomology made its customary annual visit to the orchard of Mr.

F. P. Vergon, at Delaware. This is one of the best managed commercial apple orchards of the state, and has produced an excellent crop of fruit this year. The varieties most largely grown are Stark, Minkler, Rome Beauty and Ben Davis.

On October 21, at 3 o'clock, G. T. Snyder, '06, was united in marriage to Miss Edna Ryerson, of Monroeville, O. Their address is Monroeville, O., where G. T. is engaged in farming.

R. C. E. Wallace, '06, was married on Wednesday, October 28, to Miss Mabel Fellows, of Columbus. They will be at home after November 25, 1908, at 12 Bowman street, Wooster, O.

Franklin County Pomona Grange held its regular quarterly meeting in Townshend Hall with the University Grange, Wednesday, the twenty-first of October. There were 120 visitors and luncheon was served to a total of 180 in the corridors of Townshend Hall. Nineteen students and members of the faculty of the University took the fifth degree. After the regular meeting the grangers were entertained with an illustrated lecture by Professor Graham, Superintendent of Agricultural Extension.

The entire Animal Husbandry Department has moved from Townshend Hall to their new offices in the judging pavilion. The new offices are large and roomy, new and clean, so that they are altogether desirable. All animal husbandry classes are now held in the pavilion either in the judging room or the recitation rooms on the second floor.

During last summer the new stock barn at the Massachusetts Agricultural College was destroyed by fire with the exception of a fire-proof wing. This was the most costly college barn in the United States, there having been spent upon it about \$40,000. All kinds of stock except horses were kept in it. There was considerable stock burned in it and it was not insured. It had been occupied only a year and was regarded as one of the finest and most sanitary barns in the United States. This is the third time in twenty years that the main stock barn at Massachusetts has burned.

While in France last summer Professor Plumb obtained a very valuable col-

lection of French works on the horse, including a number of complete sets of stud books.

The class in advanced judging from which a team is selected each year to represent the University in the judging contest at the International Stock Show is doing very good work. There will be only five men selected this year and they will judge all classes. The work is entirely under the control of Prof. Marshall and the team has not been selected yet. The class will make a trip into Grèene County about the 13th of November, where there is much good stock. The team will go to Chicago on the day after Thanksgiving, and the contest takes place on Saturday after Thanksgiving.



THE CHICAGO STOCK SHOW

The International Live Stock Exposition, held this year from November 28 to December 10, is the supreme court of the year's prize winners, justly styled the show of champions, the show within whose portals the bluest blood of the bovine, ovine and porcine families struggles for supremacy, the exposition whose educational value cannot be overestimated.

Here the foremost breeders, who, by constant study, mutual contact, observation and comparison, have succeeded in producing the best, are giving the world the benefit of their labors. Here the breeder and feeder are shown by actual block demonstration by what methods their work can be made more profitable, and the kind of animals the butcher wishes them to supply. These and the many other object lessons that can only be earned

by a visit to this great exposition make a visit to the "International" a paying investment and part of the training of every progressive farmer, feeder and breeder.

The fact of his having attended a previous show does not signify, for new problems are being solved here each year, each year sees the work and achievements of the previous shows surpassed and at each successive exposition new standards of excellence are brought to the attention of the public. Let the live stock interests get behind this triumphant success, let them center upon this leading live stock exposition as the pride of American enterprise and let their patriotism force them to offer encouragement by attending, thus making it possible to continue this splendid work and to make it the world's greatest live stock exposition in every sense of the word.

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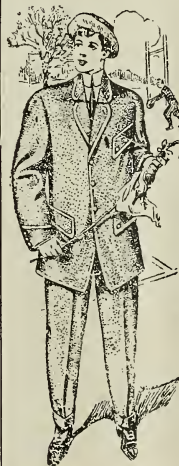
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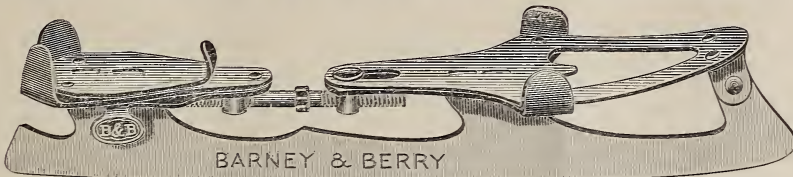
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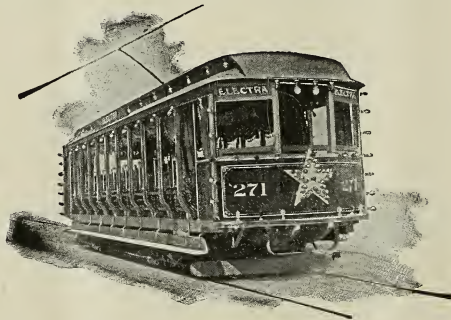
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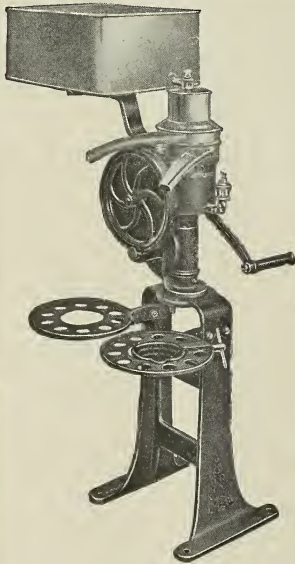
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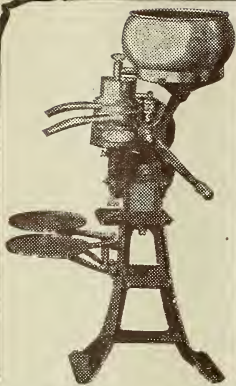
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